September 23, '97
- George has latest spec sheet - "Aug '97 Rev A"
    - incorporated latest from Tom's DMM specs
    - need to work with George to beef up

- Dummy set : Multimeter, TIMS (Insertion Line Loss), and TDR by end of October

- Demo set: TDR, Insertion Loss, DMM by end of December
        - ADSL and other plug in modules to come later

- Labels
    - LEDs - no definition; July 28 is latest date
    - Keypad - layout is pretty much done
        - Still can define some keys

- Need Master Marketing Analysis/Statement (by Friday, for concept selling, etc)
    - High level User Interface
        - Functional Description of each selection
    - Application Diagrams
        - detailed description of what unit can do
        - all ways unit can plug in
    - Hardware vendors- "who's first, who's second"
        - 60 vendors of chip-set providers for ADSL
    - Keypad
    - LEDs
    - Substitutions/Competitors
        - Fluke
    - Specs/Requirements from RBOCs, other carriers
    - ADSL Local Exchange Carriers
    - Target Prices
        - Options (i.e. removable accessories)
    - Alcatel 3.0 chips
        - Rack mount units, ADSL modems - there is administrative stuff in modules in CO
        (is this the serial number entry??)
        - We have preliminary specs

- Marketing Strategy

- Sant: What is purpose for Capacitance/Resistance measurement?
        - In Europe, You measure line loss as a function of frequency and Cross Talk
            - 2 SETS to measure the loss

- Sant: Do not call our measurement Digital TIMS- it implies many measurements
        - We should call it Insertion Loss Measurement

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September 24, '97 (meeting with Paul and Ray; separately with Tom)

- Determining cable quality (Layer 1 Physical Measurements)
   - TDR : Bridge Taps, Load Coils - finding open or short

   - DMM : short to ground, foreign voltage, voltage drop, resistance drop, high
           capacitance (pF/feet measurement)
             - i.e. wrong wire connected -> capacitance goes up
             - longer the line, the bigger the capacitance
             - power voltage on tip and ring (48V line power measurement)
             - on POTS splitter, measure capacitance, resistance drop, and voltage drop to
              determine integrity of line to the POTS

   - INSERTION LOSS : Attenuation -> level measurement (we don't measure noise)
      - single tone vs. sweeping tone
      - wideband TIMS - 60 to 70 dB loss capability
        - DMT coding requires measurement to 40 to 50 dB loss

      - signal to noise measures attenuation
      - flatness (Amplitude vs. Frequency) but 0.1 dB is too good!?
      - can indicate crosstalk - we need filter implementation - has our engineers looked at
        it?

- Layer 2 : Link Layer
   - done by Alcatel chipset- Discrete Multiple Tone (DMT)
      - displays raw throughput (takes into account overall loss, crosstalk, bridgetaps)

   - measure of pilot tones - Sig to Noise measurement on each frequency (4.8 Hz to 1
   Mhz), 0 to 8 bits/channel vertical

   - it is a display of line quality
   - Get this graph on our screen

- Layer 3 : Our own Ping Test

- Other notes:
      - Alcatel modem may contain supervisory language (administrative capability) at the
      Central Office (i.e. between chips 1 & 2) - need access
        - Not endorsed by ANSI - this kind of feature is hindrance with other chipset
        makers as well
      - Turn up from Customer Prem site might require serial number of Alcatel modem -
      (our tester needs access)

      - Study ANSI's spec on DMT (T1.413)
      - No ADSL Alcatel Chip set until December